

What is claimed is:

1. A process for cold forming a shaped article of an edible product comprising:

feeding material having a Bingham plastic rheology from which the article is to be shaped in free flowable particulate form to a pair of counter rotating form rolls which have indentations on their surfaces conforming to the desired shape of said article;

compacting and compressing said particulate material to form a unified cohesive sheet of said material including shaped articles which conform to said indentations interconnected by a thin web of said material; and

separating the shaped formed article from the interconnecting web.

2. The process of claim 1 wherein the material to be processed is selected from the group consisting of fat continuous materials and chocolate.

3. The process of claim 1 wherein the material to be processed is gravity fed to said form rolls.

4. The process of claim 1 including the step of cooling the surfaces of said form rolls to remove heat from said article generated by said compaction and compression.

5. The process of claim 4 including circulating a cooling medium near the surfaces of said form rolls and circulating a cooling medium through the shafts upon which said form rolls are mounted.

6. The process of claim 1 including the step of generating differential motion between said form rolls to enhance the release of the shaped product sheet from said rolls.

7. The process of claim 1 including the step of imparting a differential flexing movement to the shafts on which said form rolls are mounted as said material passes through the nip of said form rolls.

8. The process of claim 1 including the step of imparting a twisting force to the shafts on which said form rolls are mounted as said material passes through the nip of said form rolls.

9. The process of claim 1 including the step of imparting a differential flexing movement and a differential twisting force to the shafts on which said form rolls are mounted as said material passes through the nip of said form rolls.

10. An apparatus for cold forming a shaped article of an edible product from particulate pieces of said product comprising:

a support frame structure;

a pair of form rolls mounted for counter rotation within said frame structure;

said mounting for said form rolls comprising a shaft for each said form roll rotatably mounted within said frame structure;

each said form rolls including a plurality of depressions on the peripheral surface thereof shaped to

form an article of a desired shape;

each said form roll being mounted for counterrotation toward each other with said depressions aligned to match with the depressions in the other of said form rolls at the interface where each form roll is closest to the other;

drive means for driving said form rolls in counterrotation; and

said rolls being spaced from each other so as to compress and compact said particulate pieces into shaped article conforming to the shaped depressions on said form rolls interconnected by a thin web of said material.

11. Apparatus according to claim 10 wherein said drive means comprises a variable speed drive means.

12. Apparatus according to claim 10 wherein said form rolls including a fluid passageway adjacent the surface of said rolls to accommodate the flow of a fluid medium at a temperature which is other than ambient temperature.

13. Apparatus according to claim 12 including a fluid passageway through said shafts upon which said form rolls are mounted in fluid communication with said fluid passageway adjacent the surface of said form rolls so that said fluid medium circulates through said shafts and through said fluid passageway adjacent the surface of said form rolls.

14. Apparatus according to claim 13 including fluid passageways within said support frame structure to accommodate the flow of said fluid medium through said fluid passageways within said support frame structure.

15. Apparatus according to claim 10 wherein said form rolls are mounted within said frame structure so that prior to the introduction of said particulate pieces of said product the surfaces of said form rolls are in contact with each other.

16. Apparatus according to claim 10 wherein said shafts are dimensioned and mounted so as to flex when said particulate pieces are shaped into a shaped configuration as said form rolls are driven.

17. Apparatus according to claim 10 wherein said shafts are dimensioned and mounted so as to twist when said particulate pieces are shaped into a shaped configuration as said form rolls are driven.

18. Apparatus according to claim 10 wherein said shafts are dimensioned and mounted so as to flex and twist when said particulate pieces are shaped into a shaped configuration as said form rolls are driven.